

EXPANDABLE FORMING TOOL

CROSS-REFERENCE TO RELATED APPLICATIONS

5/17/05
The present application is a continuation-in-part of our Application Serial No. 10/264,909 filed October 4, 2002, *now abandoned*.

BACKGROUND OF THE INVENTION

The present invention relates to tools for forming and cutting sheet metal workpieces and the like.

Machine tools are widely utilized to form sheet metal workpieces into a desired configuration by cooperating upper and lower dies which are configured to provide the contours in the workpiece. The configured forming tool is located in the head of the machine and is moved downwardly against the workpiece which is disposed upon a die that cooperates with the forming tool. Many of such dies have a resiliently deformable portion which facilitates the forming of the metal about the contours of the forming tool. Such tooling may simply deform the workpiece to provide the desired contours and the cooperating surfaces of the components will generally have radiused edges. Other tooling may cut through the workpiece and their components will have sharp cooperating edges to shear the workpiece. Some tooling may provide both forming and cutting action by the providing forming edges about a portion of the periphery and cutting edges about the remainder of the periphery.

The terms "forming" and "forming tools" as used herein encompass tools which merely form the workpiece into a desired configuration, tools which cut through the workpiece, and tools which combine both forming and cutting actions.